LISTING OF CLAIMS

1. (Cancelled)

2. (Currently amended) The method as claimed in claim 22, ~~1~~ including the step of determining a boundary between the near field and far field radiation of the ~~radiating device~~ antenna.

3. (Cancelled)

4. (Currently amended) The method as claimed in claim ~~3~~ 22, including the step of determining power density level over a plurality of positions in space.

5. (Currently amended) The method as claimed in claim 4 22, including the step of determining beam width characteristics of the antenna ~~radiating device~~ in two orthogonal far field radiation patterns.

6. (Currently amended) The method as claimed in claim ~~5~~ 22, including the step of determining the 3dB beam width in two orthogonal far field radiation patterns.

7. (Currently amended) The method as claimed in claim ~~6~~ 22, including the step of determining physical characteristics of the ~~radiating device~~ antenna to determine the far field ~~radiation characteristics~~ power flux density.

8. (Currently amended) The method as claimed in claim ~~7~~ 22, including the step of providing a model ~~including representing~~ that represents the device by a plurality of radiation sources.

9. (Currently amended) The method as claimed in claim ~~1~~ 22, wherein the ~~radiating device comprises~~ antenna is a wire antenna.

10. (Currently amended) The method as claimed in claim 9 including the step of providing a model that represents ~~including representing~~ the ~~radiating device~~ antenna by a plurality of wire elements.

11. (Currently amended) The method as claimed in claim 10 including the step of estimating the length and spacing of each wire element forming the ~~radiating device~~ antenna.

12. (Original) The method as claimed in claim 11 wherein each wire element is represented as a radiation source.

13. (Original) The method as claimed in claim 12 including the step of calculating mutual coupling between all the wire elements.

14. (Original) The method as claimed in claim 13 including the step of assembling an N by N impedance matrix and calculating the voltage for each element to determine the current in each element.

15. (Original) The method as claimed in claim 14 including the step of multiplying the inverse impedance matrix by the column voltage vector to determine the current in each element.

16. (Original) The method as claimed in claim 15 including the step of assigning a Huygen's wavelet point source to each element and calculating the magnitude and phase of each wavelet point source from the current determined.

17. (Original) The method as claimed in claim 16 including the step of summing the contribution of each point source to each point in space within the near field.

18. (Currently amended) The method as claimed in claim ~~1~~ 22, including the step of providing a single point source for each element with a length less than half a wavelength.

19. (Currently amended) The method as claimed in claim ~~1~~ 22, wherein the ~~radiating device~~ antenna is an aperture antenna.

20. (Currently amended) The device as claimed in claim 19 including the step of determining the physical characteristics of the ~~radiating device~~ antenna and providing a model that represents ~~including representing~~ the aperture by at least one Huygen's wavelet source.

21. (Original) The method as claimed in claim 20 including the step of summing the contribution from each wavelet source to each point in space.

22. (Currently amended) ~~The~~ A method for determining power flux density for a wire antenna or an aperture antenna, the method comprising the steps of:

determining far field power flux density of a wire antenna or an aperture antenna;

providing a model of the antenna, which model approximates the determined far field power flux density;

determining a near field power flux density from the model for at least one point in space; and

~~as claimed in claim 21 wherein the power density level at any point in space is determined~~ determining the power density level using the formula $Pd = PoweratAntenna * 10^{(Gd + 2.15)/10} / 4\pi Di^2$.

23. (Cancelled)

24. (Currently amended) The method as claimed in claim ~~23~~ 27, including the step of displaying the power density level for a plurality of positions.

25. (Original) The method as claimed in claim 24 including summing the power density level determined at each position for all point sources representing the ~~radiating device~~ antenna.

26. (Currently amended) The method as claimed in claim 25 including the step of calculating far field and near field tapering characteristics for each position.

27. (Currently amended) ~~The~~ A method ~~as claimed in claim 26 including the step~~ of estimating radiation power density of electromagnetic radiation comprising the steps of:

determining a model for a wire or aperture antenna based on radiation patterns;

representing the antenna as a plurality of point sources that radiate electromagnetic radiation;

~~calculating~~ estimating the power density level at a ~~point~~ plurality of positions in space by using the power density formula $Pd = PoweratAntenna * 10^{(Gd + 2.15)/10} / 4\pi Di^2$ for far field radiation and modifying the far field power density formula for near field radiation, which modification affects the antenna gain, power sent to the antenna and the distance from the antenna to the point source; and

determining the total power density level at each position by summing the contribution of each point source to the respective positions in space.

28. (Cancelled)

29. (Cancelled)

30. (Currently amended) The method as claimed in claim ~~29~~ 27, including the step of applying a closest point algorithm to determine the power density level at each point in space.

31. (Currently amended) The method as claimed in claim 30 wherein the closest point algorithm determines the displacement of the point in space from the closest point on the ~~radiating device~~ antenna.

32. (Currently amended) The method as claimed in claim 31 wherein the closest point algorithm calculates X, Y, Z displacement vectors from the point in space to the closest point on the ~~radiating device~~ antenna and calculates azimuth and elevation angles to the closest point.

33. (Currently amended) The method as claimed in claim ~~33~~ 30, wherein the closest point algorithm determines the orientation of the ~~radiating device~~ antenna and scales the power density level determined according to the orientation of the ~~radiation device~~ antenna..

34. (Currently amended) The method as claimed in claim ~~34~~ 30, wherein the closest point algorithm calculates the power density level using the power density formula and incorporates any modification factor applicable if the point in space is in the near field.

35. (Currently amended) The method as claimed in claim ~~23~~ 27, wherein the model for the ~~radiating device~~ antenna is determined from two orthogonal far field radiation patterns.